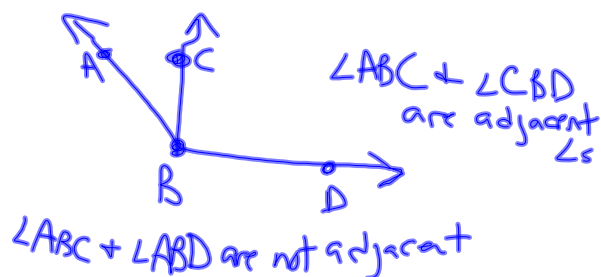
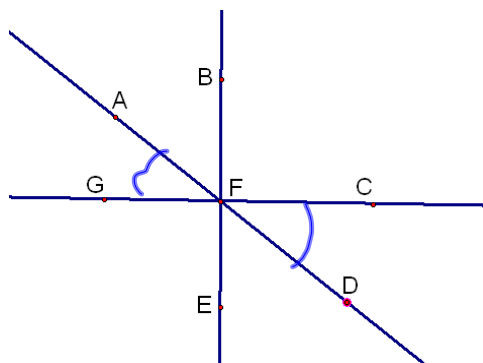
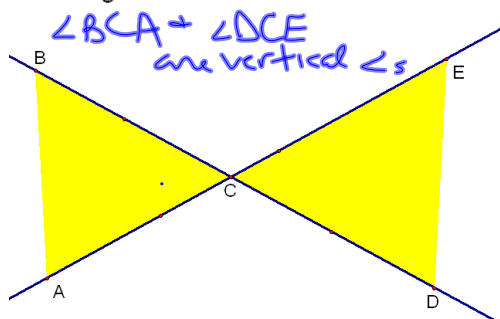


## 1.5 Describe Angle Pair Relationships

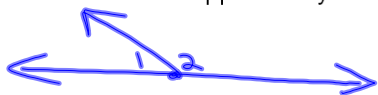
Adjacent angles—2  $\angle$ s that lie in the same plane, have a common vertex, and a common side, but no common interior points



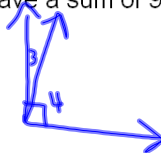
Vertical angles—2 nonadjacent  $\angle$ s formed by intersecting lines



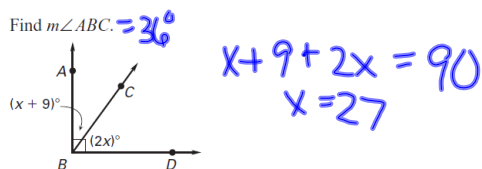
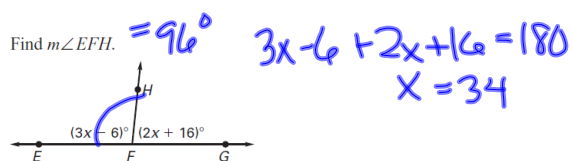
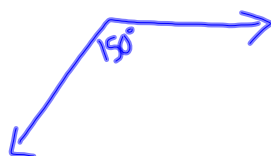
Linear pair—a pair of adjacent  $\angle$ s whose non-common sides are opposite rays



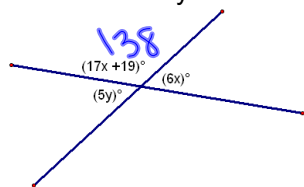
Complementary angles—2  $\angle$ s whose measures have a sum of  $90^\circ$



Supplementary angles—2  $\angle$ s whose measures have a sum of  $180^\circ$



Solve for x and y.



$$17x + 19 + 6x = 180$$

$$x = 7$$

$$5y + 138 = 180$$

$$5y = 42$$

$$y = 8.4$$

Example 1

An angle is  $6^\circ$  less than twice its complement. Find the angles.

$$\begin{cases} x + y = 90 \\ y = 2x - 6 \end{cases}$$

$$32^\circ \quad 58^\circ$$

Example 2

An angle is  $44^\circ$  more than its supplement. Find the angles.

$$\begin{aligned} x + y &= 180 \\ y &= x + 44 \\ x + x + 44 &= 180 \\ 2x &= 136 \\ x &= 68 \end{aligned}$$

Example 3 Two angles are complementary.

An angle is 17 times as large as the other. Find the angles.

$$\begin{aligned} x + 17x &= 90 \\ 18x &= 90 \\ x &= 5 \end{aligned}$$

Hw  
p38-40  
#s3-9, 12, 13, 18, 19,  
20-28, 31,32